

PATENT

IBM/04B

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Joseph Phillip Bigus et al.      Art Unit: 2762  
Serial No.: 09/100,595      Examiner: Unknown  
Filed: June 19, 1998      Atty. Docket No.: IBM/04B  
For: PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF  
COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE  
PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN  
KNOWLEDGE

---

**TRANSMITTAL**

Assistant Commissioner for Patents  
Washington, DC 20231

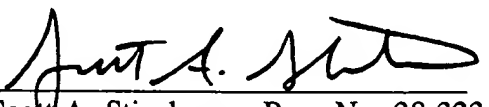
Sir:

We are transmitting herewith the attached:

Transmittal (in duplicate) containing Certificate of Mailing Under 37 CFR 1.8  
Request for Corrected Filing Receipt  
Copy of Preliminary Amendment  
Copy of Filing Receipt Noting Correction  
Reply Post Card.

Please charge any additional fees or credit overpayment to Deposit Account No. 23-3000.  
A duplicate of this sheet is enclosed.

WOOD, HERRON & EVANS, L.L.P.  
2700 Carew Tower  
Cincinnati, Ohio 45202  
(513) 241-2324

By:   
Scott A. Stinebruner Reg. No. 38,323

**CERTIFICATE OF MAILING 37 CFR 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Assistant Commissioner for Patents, Washington, D.C. 20231 on August 3, 1998.

  
Scott A. Stinebruner Reg. No. 38,323

Application Ser. No. 09/100,595

Doc. No. 39,080-01  
(IBM-04B)  
R0996-052L

Please place the official stamp of the Patent Office on this card and return it to constitute acknowledgment by the Patent Office of receipt on the date stamped.

Inventor(s): Joseph Phillip Bigus et al.  
Title: PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN KNOWLEDGE

Enclosure(s): Transmittal (in duplicate) containing Certificate of Mailing Under 37 CFR 1.8  
Request for Corrected Filing Receipt  
Copy of Preliminary Amendment  
Copy of Filing Receipt Noting Correction  
Reply Postcard

Attorney: SAS/jlv

Date: August 3, 1998

Wood, Herron & Evans, L.L.P.

WOOD, HERRON & EVANS, L.L.P.  
2700 CAREW TOWER  
441 VINE STREET  
CINCINNATI, OH 45202-2917

TO:

Assistant Commissioner for Patents  
Washington, D.C. 20231

01 41 03 201 1

PL

FILING RECEIPT



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
09/100,595	06/19/98	2762	\$790.00	IBM/04B	9	16	1

SCOTT A STINEBRUNER  
WOOD HERRON AND EVANS  
2700 CAREW TOWER  
CINCINNATI OH 45202

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

Applicant(s)

JOSEPH PHILLIP BIGUS, ROCHESTER, MN; BRIAN JOHN CRAGUN,  
ROCHESTER, MN; HELEN ROXLO DELP, ROCHESTER, MN.

CONTINUING DATA AS CLAIMED BY APPLICANT-

THIS APPLN IS A DIV OF 08/822,993 03/21/97

FOREIGN FILING LICENSE GRANTED 07/13/98

TITLE PROGRAM PRODUCT

APPARATUS AND METHOD FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS  
USING INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING VARIED  
DEGREES OF DOMAIN KNOWLEDGE

PRELIMINARY CLASS: 395

88 JUN 23 1998

88 JUN 23 1998

FILING RECEIPT



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*dh*

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
09/100,595	06/19/98	2762	\$790.00	IBM/04B	9	16	1

SCOTT A STINEBRUNER  
WOOD HERRON AND EVANS  
2700 CAREW TOWER  
CINCINNATI OH 45202

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Application Processing Division's Customer Correction Branch within 10 days of receipt. Please provide a copy of the Filing Receipt with the changes noted thereon.

Applicant(s)

JOSEPH PHILLIP BIGUS, ROCHESTER, MN; BRIAN JOHN CRAGUN,  
ROCHESTER, MN; HELEN ROXLO DELP, ROCHESTER, MN.

CONTINUING DATA AS CLAIMED BY APPLICANT-

THIS APPLN IS A DIV OF 08/822,993 03/21/97

FOREIGN FILING LICENSE GRANTED 07/13/98

TITLE

APPARATUS AND METHOD FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS  
USING INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING VARIED  
DEGREES OF DOMAIN KNOWLEDGE

PRELIMINARY CLASS: 395

82 JUN 22 1998

82 JUN 22 1998

*RP*

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Joseph Phillip Bigus et al.                      Art Unit: Unknown  
Serial No.: FILED HEREWITH                                      Examiner: Unknown  
Filed: June 19, 1998    Atty. Docket No.: IBM/04B  
For: PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF  
COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE  
PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN  
KNOWLEDGE (As Amended)

---

**PRELIMINARY AMENDMENT**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Please amend the above-identified patent application as follows:

**Amendments**

**In the Title**

Please amend the title to read --PROGRAM PRODUCT FOR OPTIMIZING THE  
PERFORMANCE OF COMPUTER TASKS USING INTELLIGENT AGENT WITH  
MULTIPLE PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN  
KNOWLEDGE--.

**In the Specification**

At page 1, line 6, please insert the paragraph:

--This application is a divisional application of U.S. Serial No. 08/822,993, filed  
on March 21, 1997 by Bigus et al., entitled "APPARATUS AND METHOD FOR  
OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS USING  
INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING  
VARIED DEGREES OF DOMAIN KNOWLEDGE", which application is  
incorporated by reference herein.--

At page 1, lines 7-8, please delete "even date herewith" and substitute therefor  
--March 21, 1997--.

At page 1, line 8, please delete "Serial No. \_\_\_\_\_" and substitute therefor  
--Serial No. 08/821,935--.

At page 1, lines 10-11, please delete "Serial No. \_\_\_\_\_" and substitute therefor  
--Serial No. 08/822,119--.

At page 1, line 13, please delete "Serial No. \_\_\_\_\_" and substitute therefor  
--Serial No. 08/826,107--.

At page 28, lines 32-33, please delete "Serial No. \_\_\_\_\_" and substitute  
therefor --Serial No. 08/822,119--.

At page 31, line 28, please delete "Serial No. \_\_\_\_\_" and substitute therefor  
--Serial No. 08/821,935--.

At page 32, line 11, please delete "Serial No. \_\_\_\_\_" and substitute therefor  
--Serial No. 08/822,119--.

#### In the Claims

Please cancel claims 1-29 and 33-35 without prejudice.

Please add the following new claims 36-48:

1       --36. (New Claim) The program product of claim 30, wherein the program  
2 further includes an evaluation module configured to select the selected program module  
3 based upon the objective criteria.

1       37. (New Claim) The program product of claim 36, wherein the program further  
2 includes a reinforcement learning module, coupled to the evaluation module and  
3 configured to adaptively select program modules based upon the performance of the  
4 plurality of program modules in handling the computer task.

1           38. (New Claim) The program product of claim 37, wherein the reinforcement  
2 learning module comprises an adaptive heuristic critic neural network.

1           39. (New Claim) The program product of claim 36, wherein the evaluation  
2 module is configured to retrieve information for a selected computer task, determine a  
3 selected value for the objective criteria for the selected computer task, and select as the  
4 selected program module one of the plurality of program modules which is matched with  
5 the selected value of the objective criteria.

1           40. (New Claim) The program product of claim 36, wherein the evaluation  
2 module is implemented in an agent manager.

1           41. (New Claim) The program product of claim 36, wherein the evaluation  
2 module is implemented in the intelligent agent.

1           42. (New Claim) The program product of claim 36, wherein the intelligent agent  
2 includes only the selected program module from the plurality of program modules, and  
3 wherein the evaluation module is configured to construct the intelligent agent using the  
4 selected program module.

1           43. (New Claim) The program product of claim 36, wherein the intelligent agent  
2 includes each of the plurality of program modules, and wherein the evaluation module is  
3 configured to execute only the selected program module to handle the computer task.

1           44. (New Claim) The program product of claim 36, wherein the plurality of  
2 program modules are additive program modules, and wherein the evaluation module is  
3 configured to select a subset of the plurality of program modules to handle the computer  
4 task.

1           45. (New Claim) The program product of claim 36, wherein the plurality of  
2 program modules are alternative program modules, and wherein the evaluation module is  
3 configured to select only one of the plurality of program modules to handle the computer  
4 task.

1           46. (New Claim) The program product of claim 30, wherein the intelligent agent  
2 is configured to conduct negotiations in an electronic commerce application, and wherein  
3 the domain knowledge for each of the plurality of program modules is related to the  
4 autonomy delegated thereto.

1           47. (New Claim) The program product of claim 46, wherein the plurality of  
2 program modules includes a semi-autonomous program module, a fully-autonomous  
3 program module, and a fully-dependent program module.

1           48. (New Claim) The program product of claim 46, wherein the objective criteria  
2 includes a risk that a dispatched agent is subjected to in negotiations.--

#### Remarks

The above amendments are being made prior to the calculation of filing fees for the above-identified patent application. Moreover, the amendments are not directed to new matter, nor are they being made in response to any art-based rejection.

5 Consideration and allowance of all pending claims is respectfully requested.

If there are any questions regarding this paper, or which might otherwise further this case onto allowance, please contact the undersigned at (513)241-2324. Moreover, if

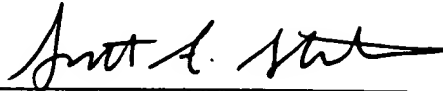


ny other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

19 JUNE 1998

Date



Scott A. Stinebruner

Reg. No. 38,323

WOOD, HERRON & EVANS, L.L.P.

2700 Carew Tower

Cincinnati, Ohio 45202

(513)241-2324

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Joseph Phillip Bigus et al.                      Art Unit: 2762  
Serial No.: 09/100,595    Examiner: Unknown  
Filed: June 19, 1998    Atty. Docket No.: IBM/04B  
For: PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF  
COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE  
PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN  
KNOWLEDGE

---

**REQUEST FOR CORRECTED FILING RECEIPT**

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

This letter is for the purpose of requesting a corrected filing receipt for the above-identified patent application. The filing receipt received from the United States Patent and Trademark Office contains an error; namely, the title of the application was not amended as requested in the Preliminary Amendment filed with the application. Please delete "APPARATUS AND METHOD" and substitute therefor --PROGRAM PRODUCT-- so that the title correctly reads "PROGRAM PRODUCT FOR OPTIMIZING THE PERFORMANCE OF COMPUTER TASKS USING INTELLIGENT AGENT WITH MULTIPLE PROGRAM MODULES HAVING VARIED DEGREES OF DOMAIN KNOWLEDGE". Copies of the Preliminary Amendment and the original Filing Receipt with the correction noted are enclosed.

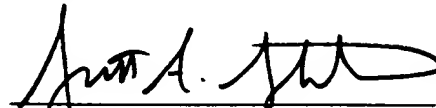
Applicants respectfully request that a corrected filing receipt be issued in this matter. If the Office has any questions regarding the foregoing, please contact the undersigned at

(513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

3 AUG 1998

Date



Scott A. Stinebruner

Reg. No. 38,323

WOOD, HERRON & EVANS, L.L.P.

2700 Carew Tower

Cincinnati, Ohio 45202

(513)241-2324